

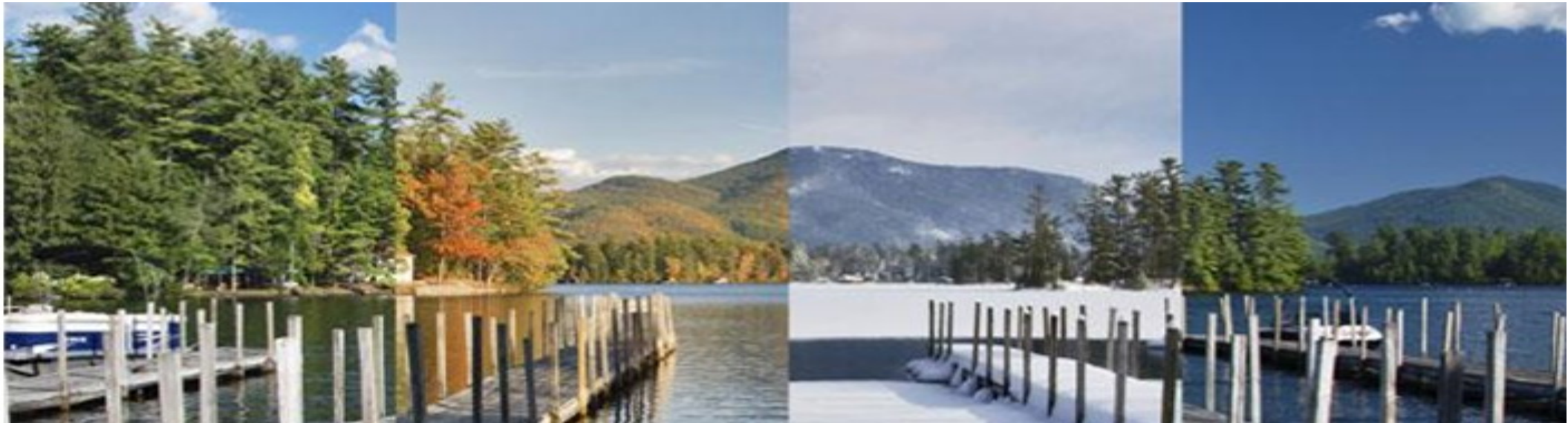


Lakes in Autumn

Hosted & Presented by NH LAKES
October 7, 2020



Our lakes change as the seasons change.



Summer

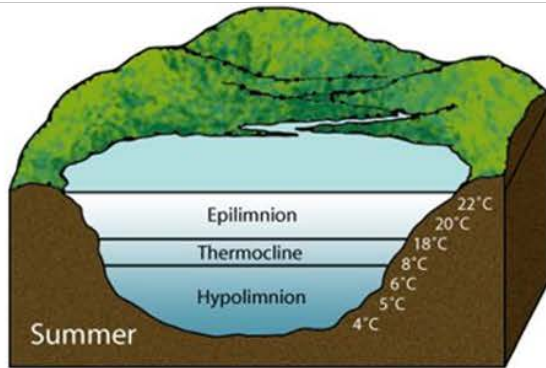
Fall

Winter

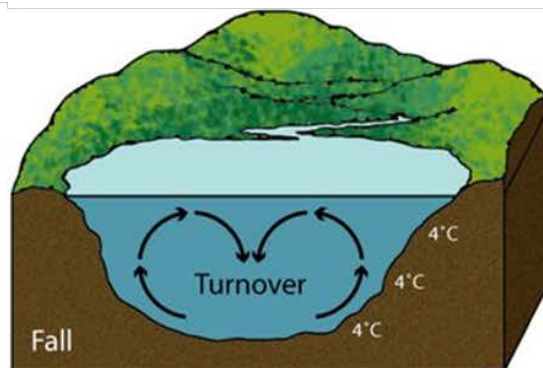
Spring



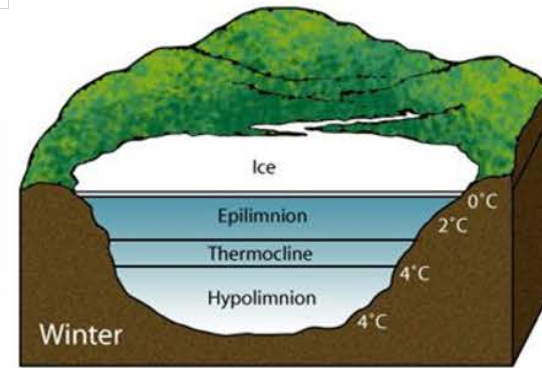
How the water moves in a lake changes as the season changes.



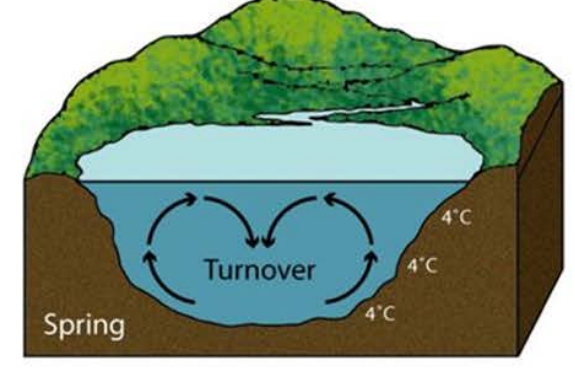
Summer



Fall

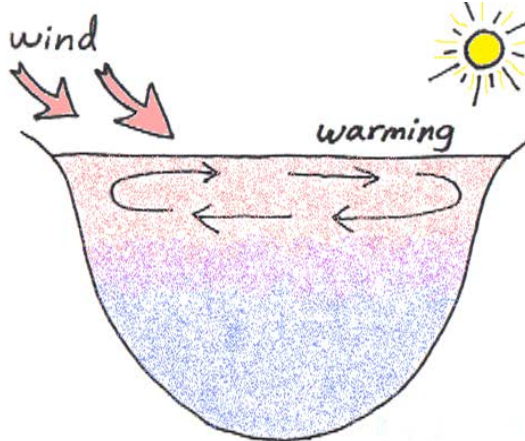
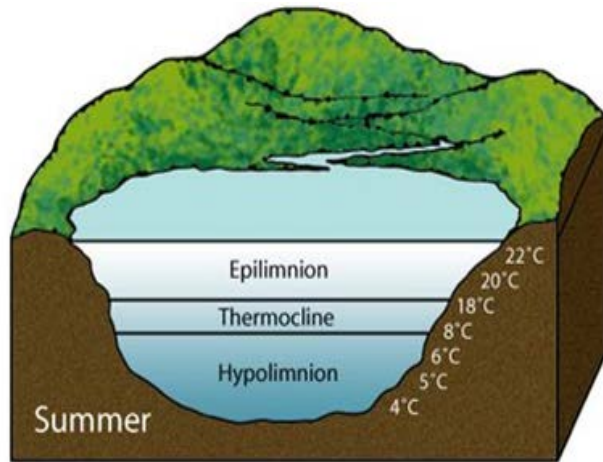


Winter



Spring

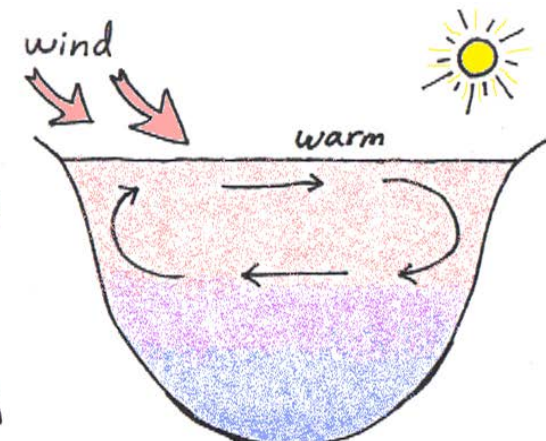
During summer...



Early-summer

warm
oxygen-rich

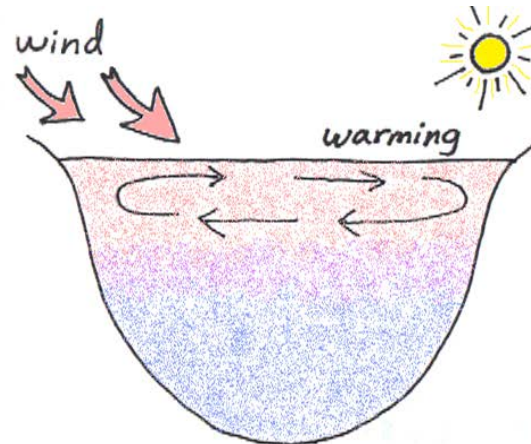
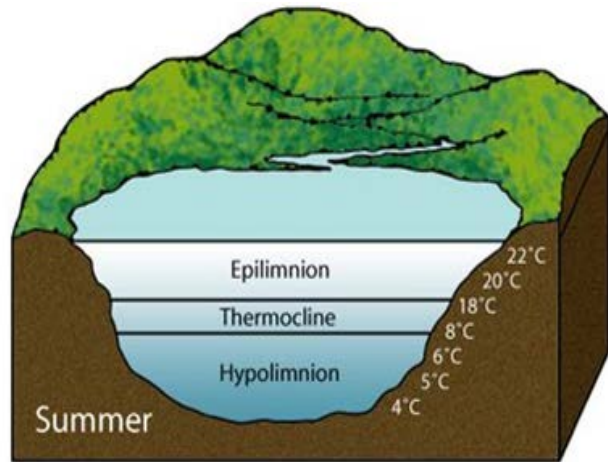
cold
nutrient-rich



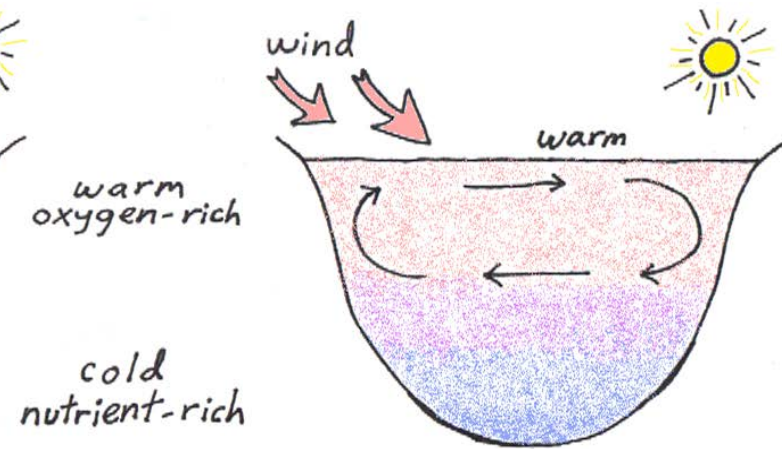
Late-summer

our deeper lakes divide into three layers based on temperature.
Warmer (less dense) water near the surface floats
on the cooler (denser) water below.

As summer goes on...

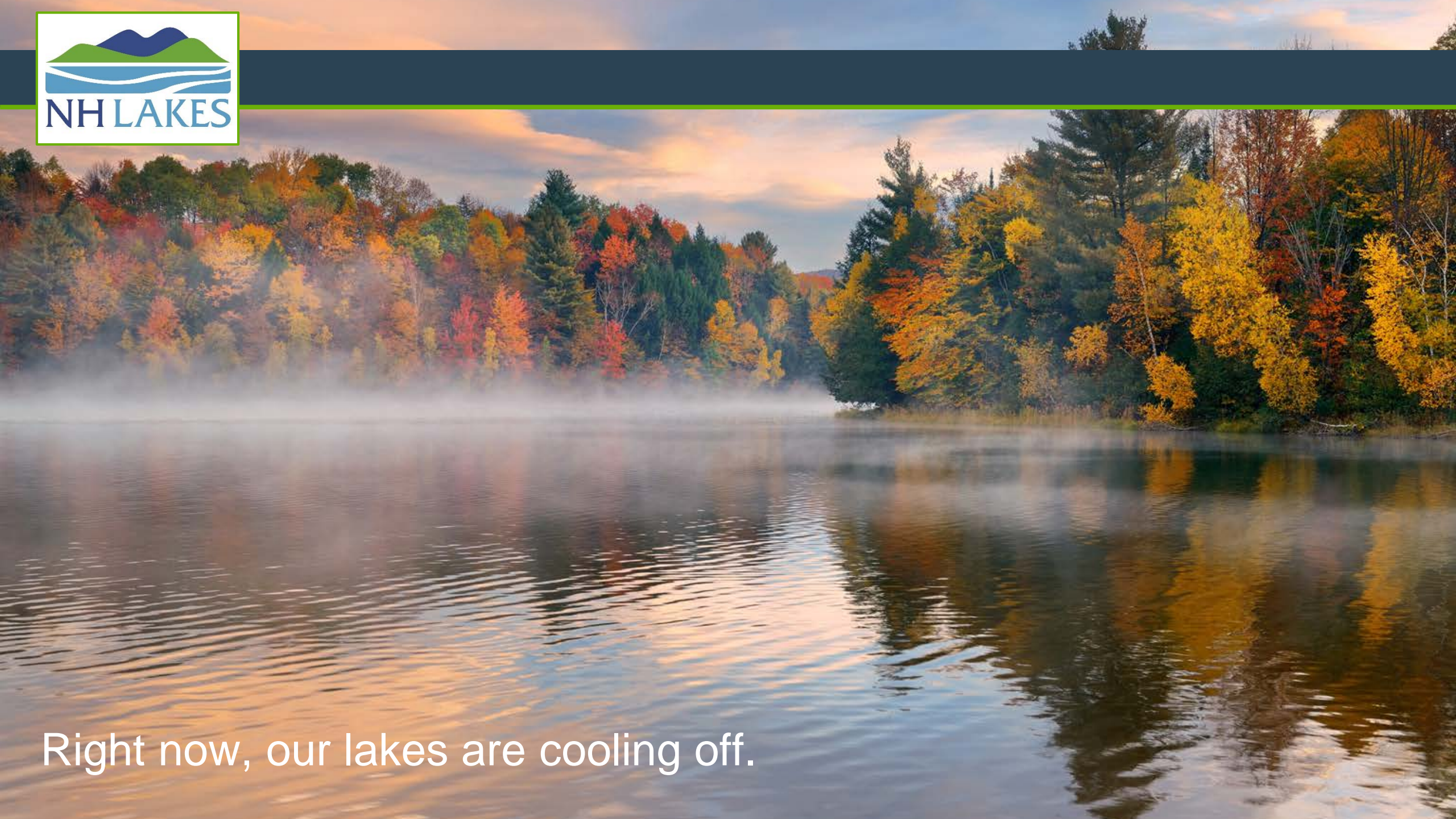


Early-summer



Late-summer

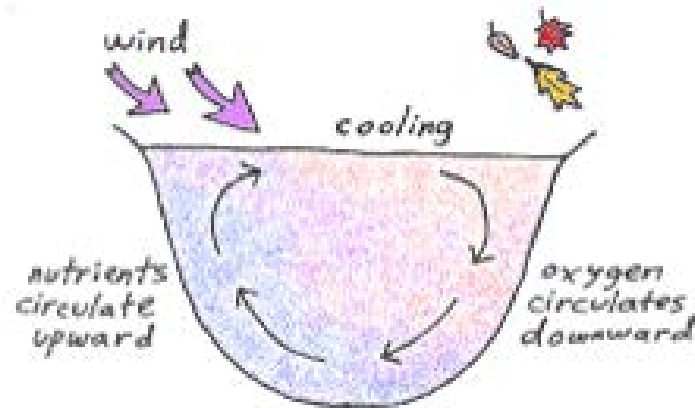
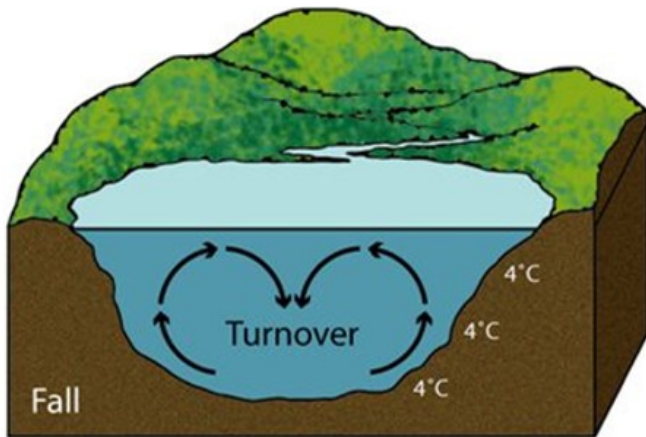
the middle layer of rapidly changing temperature moves down,
and the bottom layer is 'sealed off' from the atmosphere.
In the bottom layer, oxygen gets used up and nutrients accumulate.



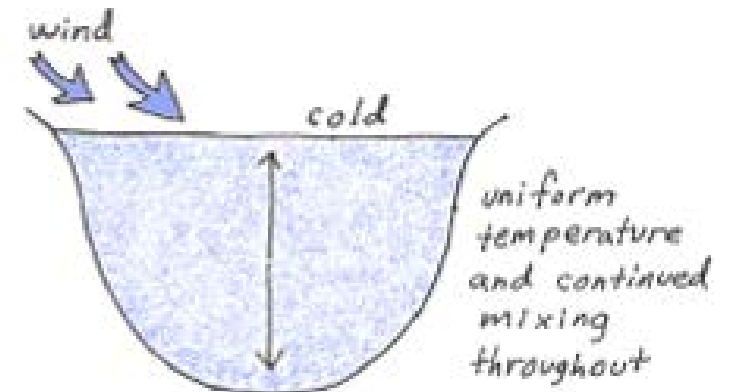
Right now, our lakes are cooling off.



They are actually loosing energy and becoming rejuvenated!



Early-Fall

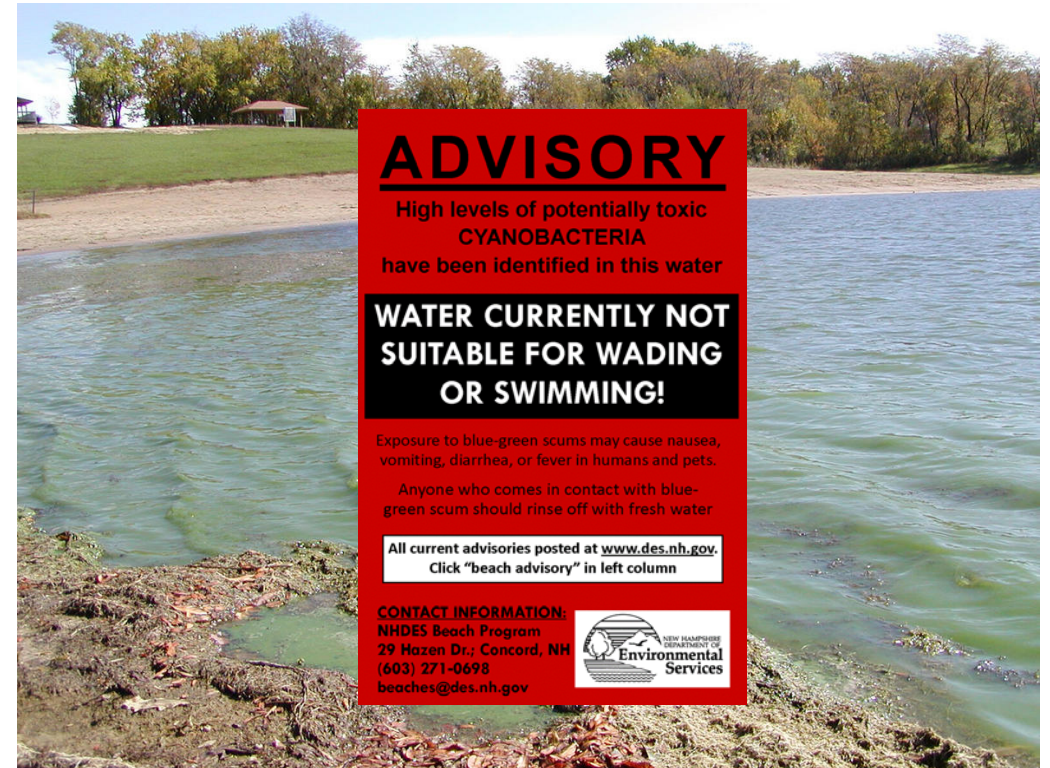
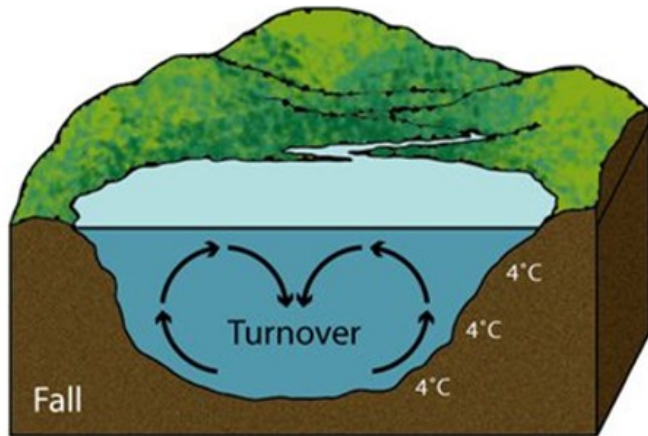


Late-Fall

Lakes loose heat (energy) and are fully mixed by wind, distributing oxygen and nutrients throughout the water.

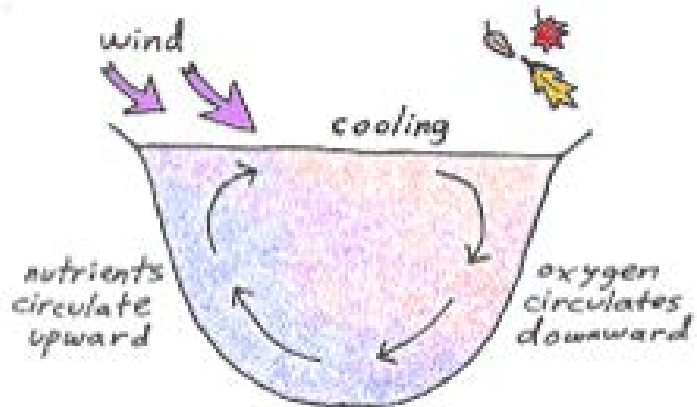


Lake mixing and turn-over is natural, but it can be alarming.

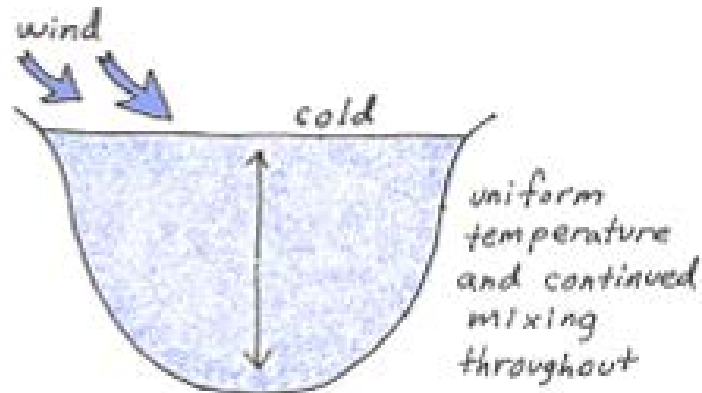




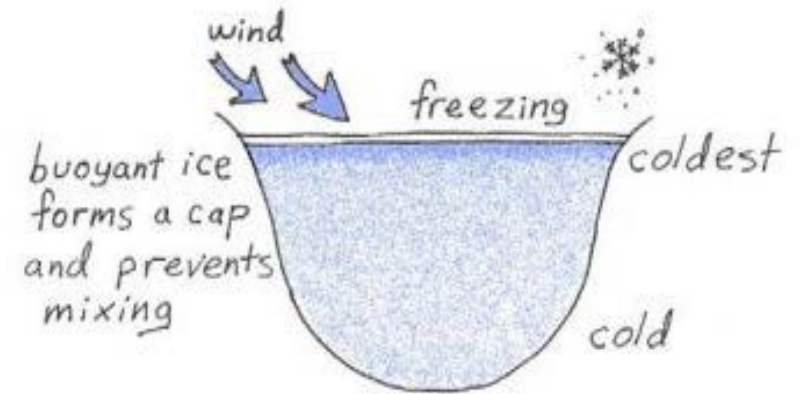
By early November...



Early Fall



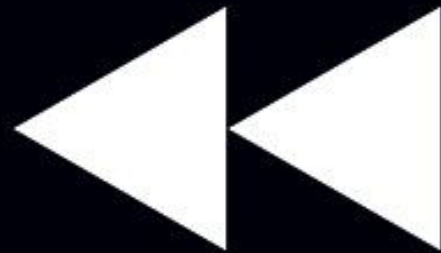
Late Fall



Winter

our lakes will be evenly mixed,
setting the stage for lakes to freeze.





REWIND



Also in autumn, lake levels become lower.



This happens naturally, and is enhanced by drawdowns on lakes with dams.

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Media Center

FOR IMMEDIATE RELEASE:
DATE: September 15, 2020
CONTACT: Dan Mattaini, (603) 271-8867

State Announces Its 2020 Fall Drawdown of Lakes

Concord, NH –The New Hampshire Department of Environmental Services (NHDES) announced today that the annual fall drawdown of the lakes and ponds controlled by dams owned by NHDES will be initiated according to the schedule below.

LAKE	RIVER	TOWN	START DATE	DEPTH (in feet) FROM FULL
Akers Pond	Greenough Brook	Errol	Oct. 12	1'
Angle Pond	Bartlett Brook	Sandown	Oct. 12	2'
Ayers Lake	Tributary to Isinglass River	Barrington	Oct. 12	3'
Ballard Pond	Taylor Brook	Derry	Oct. 12	2'
Barnstead Parade	Suncook River	Barnstead	Oct. 12	1.5'
Bow Lake	Isinglass River	Strafford	Oct. 12	4'
Burns Lake	Tributary to Johns River	Whitefield	Oct. 12	1.3'
Chesham Pond	Minnewawa Brook	Harrisville	Oct. 12	2'
Crystal Lake	Crystal Lake Brook	Enfield	Oct. 12	4'
Crystal Lake	Suncook River	Gilmanton	Oct. 12	3'
Deering Reservoir	Piscataquog River	Deering	Oct. 12	4'
East Washington Pond	Beards Brook	Washington	Oct. 12	2'
Glen Lake/Greggs Falls	Piscataquog River	Goffstown	Oct. 31	1.5'
Goose Pond	Goose Pond Brook	Canaan	Oct. 12	7.5'

[Air Quality](#)[Beach Advisory](#)[Cyanobacteria](#)[Drinking Water Advisory](#)

des.nh.gov/media/pr/2020/20200915-drawdown.htm



Due to the drought, some lakes are already at or close to drawdown levels.



“Why drawdown?”



- Protect shoreline from erosion
- Reducing ice damage during winter
- Water storage and flow regulation
- Reduce flooding in spring
- Allow for **permitted** work on shoreline structures
- Aquatic weed control



Potential Disadvantages of Drawdown:

- Too much, too fast doesn't let organisms move to deeper water
- Fish and waterfowl – reduced food source and space to occupy
- If a dry spring follows, water levels may not recover by summer





Cottages and lake houses are being closed up for the winter and boats and docks are being taken out. Seasonal residents are going back home (but maybe not this year).



“So, what happens to all the animals that live in the lake?”



“What are they doing to get ready for winter?!”



Adult loons migrate to wintering grounds in the Atlantic Ocean off the coast from Maine to Rhode Island.

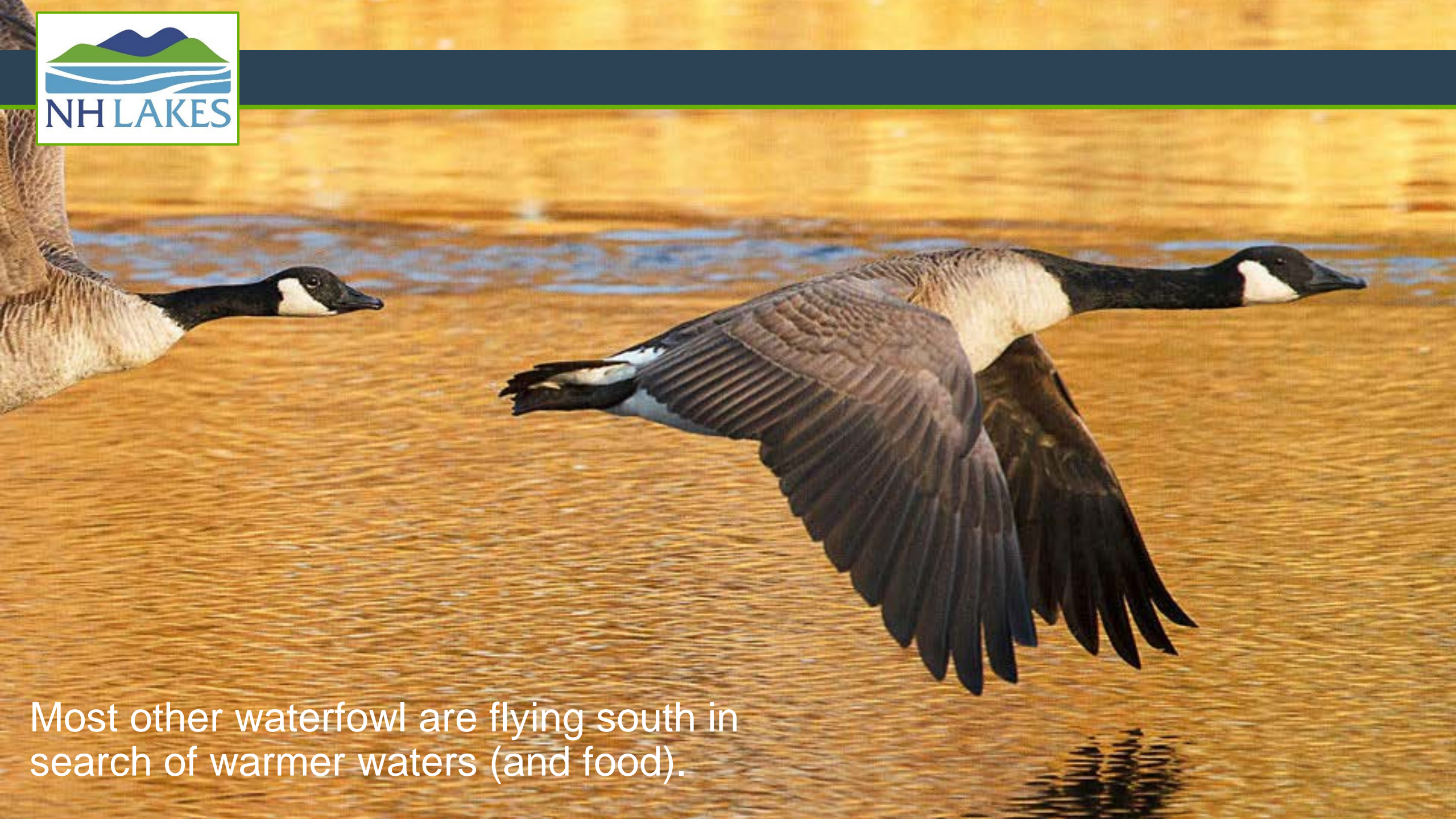




Loon chicks stay on their birth lake until just before it freezes, allowing their feathers to fully develop for the flight to the ocean.



But sometimes, loons wait a little too long.



Most other waterfowl are flying south in search of warmer waters (and food).



In early fall, fish may roam throughout the lake as oxygen is abundant, looking for plants and bait fish. As the surface water cools, fish go deeper to find warmer water.



“But what about the other animals?!”



“The otters, beavers, turtles, and frogs?!”



Be sure to tune in next month to find out!

“Otters, Beavers, Turtles, & Frogs!”

Wed. Nov. 4, 7:00 – 8:00 pm

Presented by:

Patrick Tate & Josh Megyesy, Wildlife Biologists
NH Fish & Game

Register at: nhlakes.org/explore-lakes/webinars





“I wonder. What can I do to help my favorite lake wake up healthy and rejuvenated in the spring?”





Wonder no more!



Krystal coordinates the NH LAKES
LakeSmart Lake-Friendly Living Program!



LakeSmart is an education, evaluation, & recognition program that helps property owners take action to live in a lake-friendly way, all year long.



It is free, voluntary, and non-regulatory.



LakeSmart Lake-Friendly Living Tips for Autumn



Avoid littering the lake with leaves.



Adding leaves to the lake adds nutrients that encourage plant, algae, and toxic algae growth, and contributes to “muck.”



Remove stockpiled yard waste away from water's edge.



Leaves, grass clippings, compost, ashes, and sawdust washed into lakes with spring rains bring in nutrients that encourage plant, algae, and toxic algae growth, and contribute to “muck.”



If you feel you must rake the lake bottom, avoid raking in the water.



Raking in the water disturbs the lake bottom, suspending nutrients that encourage plant, algae, and toxic algae growth. It disturbs organisms in the sediment and is not permitted.



When taking out the dock, be on the lookout for unusual looking plants, animals, and shells.



Dock owners can help identify invasive species infestations.
Report potential sightings to the NH Dept. of Environmental Services
at Amy.Smagula@des.nh.gov.



Have your septic system inspected and address any potential maintenance problems **before winter.**



Allow the grass to grow a little extra long over the tank and leach field to provide insulation.



Take a walk around your property and look for areas where soil has been washed away.



Stabilize (even temporarily) problem areas so spring rains don't make areas worse while washing soil (& nutrients) into the lake.
Get ideas for fixes at nhlakes.org/lakesmart-resource-library



Make plans to put your property (and the lake!) on a low-salt and low-sand diet this coming winter.



Hire a Green SnowPro
nhlakes.org/find-a-professional



Designate & plan to maintain
only one 'winter entrance'

Chloride in salt is toxic to aquatic life & fouls drinking water sources.
Sand brings phosphorus into lakes & smothers aquatic habitat.



Planning on de-icing around a dock or boat house with a bubbler?



Prepare to install proper signage seen from all angles & obtain a permit (\$0.50) from Town Clerk.

Use a system on a thermostat & timer to open up just enough water to disconnect structure from ice sheet (and save \$, too!). Opening up large areas poses ecological & safety issues.



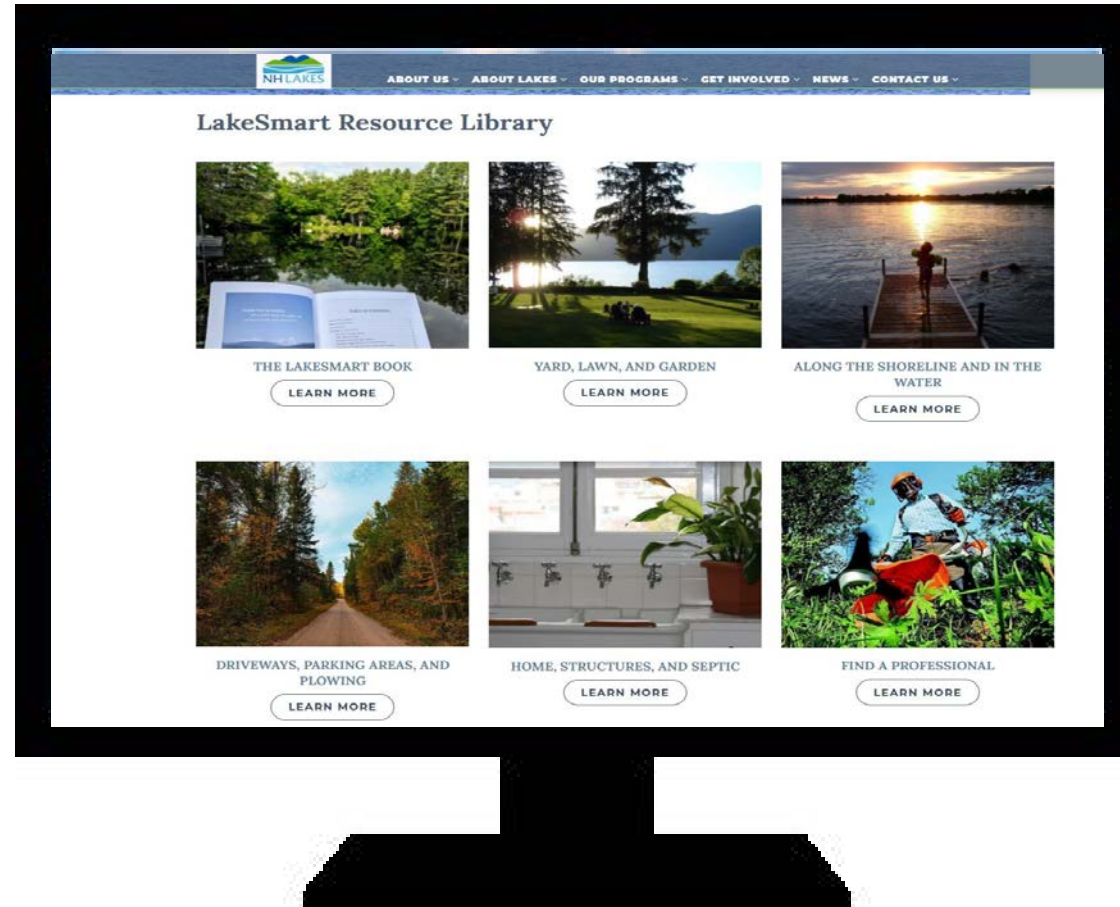
Start Your LakeSmart Journey!

The screenshot shows the LakeSmart website interface. At the top is a banner with the LakeSmart logo (a blue water drop with 'NH LAKES' inside) and the text 'LakeSmart A Lake-Friendly Living Program'. Below the banner is the title 'Property Owner Self-Assessment'. The main text reads: 'Congratulations! You are taking the first step in making lake-friendly living the new norm in your community. By taking this self-assessment you will become familiar with ways to manage your property and activities in a lake-friendly way.' Below this, it states: 'The estimated time to complete this survey is 30 minutes - add a few extra minutes if you are submitting photos.' Then, it says: 'If you have problems or questions on this survey or the program, please email lakesmart@nhlakes.org or call 603.226.0299.' A red asterisk indicates a required field. At the bottom, there is a text input field labeled 'Email address *' with the placeholder text 'Your email'.

Step 1: Take the LakeSmart Property Owner Self-Assessment online.
nhlakes.org/lakesmart



Find out more!



nhlakes.org/lakesmart-resource-library



Be sure to tune in next month!

“Otters, Beavers, Turtles, & Frogs!”

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